

A FANTASY --- PERHAPS

On the commercial forest lands of this country today are growing 30 to 40 billion trees. They are wonderful plants, beautifying the fields, making more majestic the high mountain places, glorifying the glades with their lush green foliage.

We all own these trees. They belong to us; they are ours in the same sense that beauty, majesty and glory are ours to enjoy wherever we find them; if only we have the eyes to see and the hearts to understand.

Thoughtful people feel a strong kinship with trees. There is every reason that they should, for trees have contributed so much to man's cultural progress. Man has become an amazing and magnificent creature since the protective canopy of the forest formed his first shared shelter.

"Three ways I know, doth man aspire,
In stature, wisdom and in fire."

The tree embodies something of all these characteristics. It grows rapidly in stature with a wisdom of the woods we do not quite understand, because there is something of the spirit there, and spirit is an elusive thing.

Civilization is built of thoughts and their ensuing actions and not merely of material things. Perhaps to the ancient people the tall trees of the forest encouraged abstract thoughts. Trees are symbols of strength and power, holding out hope of glorious achievement. Trees are the poems, art forms, and musical strings; the creeds and prayers and wonderful wings encouraging man to rise to greater heights.

"No ancient oak with crown high in the sky,
Can reach as high into the blue as I."

Trees are a mysterious part of the fibre of humanity, and they have every right to be, for they have so much more to do with mankind's greatness than man himself suspects.

Trees of the field and forest have been good for man from the beginning, but man has not been good for the trees.

"The groves were God's first temples. Ere man learned
To hew the shaft, and lay the architrave,
And spread the roof above them - ere he framed
The lofty vault, to gather and roll back
The sound of anthems; in the darkling wood,
Amid the cool and silence, he knelt down,
And offered to the Mightiest solemn thanks
And supplication. ---"

WILLIAM CULLEN BRYANT

FORESTRY SCHOOL LIBRARY
APR 20 1959

TREE GROWTH POTENTIAL CLASSES
A NEW TREE GRADING CONCEPT BY GEORGE SEMMENS OF REGION 9

For many years the forest inventory figures turned over to the executive staff in the front office have been only quantitative or volumetric records of the stock on hand in the woods. More recently the forest industries, particularly in the Lake States, have been making qualitative as well as quantitative inventories. Company cruisers working on CFI cases are segregating the trees into potential growth classes. These classes include tree vigor, risk and sometimes grade separations.

Qualitative inventories are important in the North Central Region where a full third of the commercial trees in every large forest are in poor growing condition. Many of the trees are prematurely old, diseased, insect infested, deformed and biologically unfit. Their vigor is low, their risk of loss high, and they are of permanently low quality. Such trees, in most cases, have no place in the managed forest which can grow more wood of higher value in less time, without them. Qualitative tree segregation is the first step toward the gradual elimination of the weak, low value members of the forest community.

Tree classification begins with the timber cruiser, and so it is necessary to draw up standards to enable him to separate trees into growth capability classes in the woods. George Semmens has done this and his standards are attached for comment. They involve a new concept.

It is Semmens' contention that the true growth potential of any tree is best determined by its physiological condition in combination with the physical condition of the tree's environment. Root and crown position both are important. The tree and its locale must both be considered. A DBH and age relationship have also been added to help the cruiser judge the growth potential of trees. This feature is particularly helpful in even-aged stands.

The new tree classes are weighted. It is possible to calculate the class into which the tree falls by simple arithmetic applied in the woods. Limiting factors are boxed in to indicate that it is not necessary to weight trees of certain crown classes and sizes, heavy with cull. The advantage of a weighted system is that it may be checked at remeasurement time and directly compared with previous weights. This comparison process fits in very well with the CFI system.

The effect of a segregation of this kind is to provide the executive staff with information on the condition of the growing stock in place. It measures the environmental efficiency of the trees in the forest and gives incentive and encouragement to forest improvement.

CAL STOTT
Forester
U. S. Forest Service, Region 9

Published for Comment
Revision Pending

QUALIFICATIONS FOR INDIVIDUAL TREE GROWTH POTENTIAL CLASSES

<u>Class</u>	<u>Class Range</u>	*	
1	5-8 Weights		
2	9-11 weights		
3	12-15 weights		

Boxed Items are
Mandatory Class 3

Qualifications

Crown Position

Crown Condition

DBH - Age Relationship

Root Placement or Tree Locale

Growth Capability

Relative Condition of Qualifying Characteristics

<u>Strong</u> 1 wt	<u>Average</u> 2 wts	<u>Weak</u> 3 wts
Head Dominant or Dominant	Codominant or Intermediate	Intermediate or [Suppressed] *
3/4 to Full 1 wt	1/4 to 3/4 2 wts	* Less than 1/4 3 wts
In horizontal and vertical axis. Good Leaf	In horizontal and vertical axis. Normal Leaf	In horizontal and vertical axis. Poor Leaf
Above Average 1 wt	Average 2 wts	Below Average 3 wts
DBH For Apparent Age	DBH For Apparent Age	DBH For Apparent Age
Good Locale 1 wt	Fair Locale: 2 wts	Poor Locale 3 wts
And Site for the Species	And Site for the Species	And Site for the Species
Progressive 1 wt	Stationary 2 wts	Regressive 3 wts
Free to Grow in Length. Little Rotten Cull. No Insect or Disease Attack.	Average Freedom to Grow in Length. Average Rotten Cull. Minor Insect or Disease Attack.	Not Free to Grow in Len. [Heavy Rotten Cull.] * [Serious Insect or Disease Attack.]